

What I claim is:

1. An improved gelatinous composition comprising: a crystal gel formed from (i) 100 parts by weight of one or more copolymers having one or more crystalline poly(ethylene) components (ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom; wherein said crystalline poly(ethylene) components having a selected amount of crystallinity sufficient to achieve improvements in one or more crystal gel properties including improved tear resistance and improved resistance to fatigue; wherein said improvements in properties of said crystal gel being greater than an amorphous gel at corresponding said gel rigidity formed from copolymers having a substantially non-crystalline components; (iii) in combination with or without a selected amount of one or more of a selected polymer or copolymer.
2. A crystal gel according to claim 1, wherein said crystalline components having a selected crystallinity of at least about 10% by weight of said copolymer as exhibited in differential scanning calorimeter (DCS) a melting endotherm of about 20oC, 21oC, 22oC, 23oC, 24oC, 25oC, 26oC, 27oC, 28oC, 29oC, 30oC, 31oC, 32oC, 33oC, 34oC, 35oC, 36oC, 37oC, 38oC, 39oC, 40oC, 41oC, 42oC, 43oC, 44oC, 45oC, 46oC, 47oC, 48oC, 49oC, 50oC, 51oC, 52oC, 53oC, 54oC, 55oC, 56oC, 57oC, 58oC, 59oC, 60oC or higher.
3. A crystal gel according to claim 1, wherein said crystalline components having a selected crystallinity of at least about 15% by weight of said copolymer as exhibited in differential scanning calorimeter (DCS) a melting endotherm of about 40oC, 41oC, 42oC, 43oC, 44oC, 45oC, 46oC, 47oC, 48oC, 49oC, 50oC, 51oC, 52oC, 53oC, 54oC, 55oC, 56oC, 57oC, 58oC, 59oC, 60oC, 61oC, 62oC, 63oC, 64oC, 65oC, 66oC, 67oC, 68oC, 69oC, 70oC, 71oC, 72oC, 73oC, 74oC, 75oC, 76oC, 77oC, 78oC, 79oC, 80oC or higher.
4. A crystal gel according to claim 1, wherein said copolymer of said crystal gel is formed in combination with or without a selected amount of one or more polymer or copolymer of poly(styrene-butadiene-styrene), poly(styrene-butadiene), poly(styrene- isoprene-styrene), poly(styrene-isoprene), poly(styrene-ethylene-propylene), poly(styrene-ethylene-propylene-styrene), poly(styrene- ethylene-butylene-styrene), poly(styrene-ethylene-butylene), poly(styrene-ethylene-propylene)n, poly(styrene-ethylene-butylene)n, maleated poly(styrene-ethylene-propylene-styrene), maleated poly(styrene-ethylene-butylene-styrene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-propylene)n, maleated poly(styrene-ethylene-butylene)n, polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene- butylene), polypropylene, polyethylene, polyethyleneoxide, poly(dimethylphenylene oxide), copolymers of trifluoromethyl-4,5-difluoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane; wherein said copolymer is a linear, branched, radial, or a multiarm copolymer.

5. A composite comprising a crystal gel of claim 1, where said gel is denoted by G being physically interlocked with a selected material M forming the combination G_nM_n , $G_nM_nG_n$, $M_nG_nM_n$, $M_nG_nG_nM_n$, $G_nM_nM_nG_n$, $G_nM_nG_nM_nG_n$, $M_nM_nM_nG_n$, $M_nM_nM_nG_nM_nM_n$, G_nG_n , $G_nG_nG_n$, $M_nG_nG_n$, $M_nM_nM_nG_nM_n$, $M_nG_nG_nM_n$, $G_nM_nG_nG_n$, $G_nM_nM_nG_n$, $G_nM_nG_nG_n$, $G_nG_nM_nM_n$, $G_nG_nM_nG_nM_n$, $G_nM_nG_nG_n$, $G_nM_nG_nM_nM_n$, $M_nG_nM_nG_nM_nG_n$, or a permutation of one or more of said G_n with M_n ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, natural fibers, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity.

6. A prosthetic device comprising a lower extremity socket insert for below knee or above knee with or without a cuff suspension formed from a crystal gel of claim 1.

7. A prosthetic device comprising a lower extremity socket insert for below knee or above knee with or without a cuff suspension formed from a crystal gel composite claim 5, wherein M is a fabric.

8. A crystal gel of claim 1, wherein said crystal gel is formed from said copolymers and one or more polyphenolics low coefficient of friction agents in combination with one or more of an internal nucleating agents or one or more of an external nucleating agents sufficient to achieve a coefficient of friction of less than 1.0 to about less than 0.40.

9. A dental floss comprising a crystal gel of claim 1, wherein said floss is formed into a strand, thread, tape, or yarn suitable for use as a dental floss.

10. A low tack gelatinous composition comprising: a crystal gel formed from
(i) 100 parts by weight of one or more copolymers having a selected amount of one or more elastomeric segments and a selected amount of one or more glassy segments, said elastomeric segments having a selected amount of one or more crystalline poly(ethylene) components and said glassy segments being a poly(styrene);
(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;
(iii) said low tack being achieved by a combination of said selected amount of crystalline poly(ethylene) components of said selected amount of said poly(styrene) forming said crystal gel, wherein said elastomeric segments and said poly(styrene) segments being a ratio of at least 37:63 and said tack of said crystal gel being less than amorphous gels of poly(styrene-ethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) of substantially same rigidities.